

From the
INTERNATIONAL SEARCHING AUTHORITY

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To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2004/004234

International filing date (day/month/year)
25.03.2004

Priority date (day/month/year)
26.03.2003

International Patent Classification (IPC) or both national classification and IPC
H05B37/02

Applicant
MATSUSHITA ELECTRIC WORKS, LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/004234

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/JP2004/004234

Box No. II Priority

1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-10
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V.

1 The following documents are referred to in this communication:

D1 : EP 0 495 305 A (VARI LITE INC) 22 July 1992 (1992-07-22)

D2 : US 5 867 166 A (SCHICK RUSSELL ET AL) 2 February 1999 (1999-02-02)

2 **INDEPENDENT CLAIM 1**

2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject matter of claim 1 does not involve an inventive step in the sense of Article 33(3)PCT.

2.1.1 Document D1, which is considered to represent the most relevant state of the art to the subject matter of claim 1, discloses (the references in parenthesis applying to this document):
a system for creating and controlling lighting designs off-line (see abstract), including (1) means to define three-dimensional objects to be illuminated (see page 5, lines 44-48, (2) means to define lighting fixtures and their targets (see page 5, lines 54-58), (3) means for adjusting lighting parameters (see page 7, lines 50-54) and (4) means for rendering a three-dimensional view of the objects to be illuminated (see page 5, lines 44-48), including the effects of adjustments of lighting parameters (see page 5, lines 50-54).

2.1.2 The subject-matter of independent claim 1 differs from the disclosure of D1 in that :
document D1 does not explicitly disclose the image processing steps (c)-(i) of claim 1.

2.1.3 The problem to be solved by the present invention may therefore be regarded as
how to reduce the amount of data to be processed for each update of the view of the object(s) to be illuminated, such as to make real-time rendering of the view feasible.

- 2.1.4 In view of D2 the solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons:
- document D2 discloses an image processing method that dramatically reduces the amount of data to be processed for each update of a view of several objects. More particularly D2 discloses the image processing steps (c)-(l) of claim 1:**
- (c) object data is transformed into discrete elements (see col. 13, lines 29-49 and fig. 5A-B) and these are assigned a colour in a colour palette (see col. 8, lines 50-60 and col. 14, lines 56-59);**
 - (d) the image processing board (176 of fig. 4A and 336 of fig. 8) performs preprocessing of lamp/lighting data;**
 - (e) the image processing board (176 and 336) produce 64-bit words of image data for the tiler;**
 - (f) the positional and characteristic data of the lights can be changed in the graphics application running on the host processor (see col. 13, lines 36-40);**
 - (g) the image processing board (176 of fig. 4A and 336 of fig. 8) performs preprocessing of lamp/lighting data;**
 - (h) only modified image data is processed (see col. 13, lines 41-49 and figures 5-7);**
 - (i) allocation of colour to elements (pixels) is done by the tiler (see fig. 9A and col. 17, line 58 - col. 18, line 11).**
- 2.1.5 Therefore the features disclosed in D1 and D2 would be combined by the skilled person, without exercise of any inventive skills in order to solve the problem posed. The proposed solution in independent claim 1 thus cannot be considered inventive (Article 33(3) PCT).

3 INDEPENDENT CLAIM 3

- 3.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject matter of claim 3 does not involve an inventive step in the sense of Article 33(3)PCT. The reasons being the same as outlined above for claim 1.

4 INDEPENDENT CLAIM 4

- 4.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject matter of claim 4 does not involve an inventive step in the sense of Article 33(3)PCT. The reasons being the same as outlined above for claim 1.

5 DEPENDENT CLAIMS 2, 5-10

Dependent claims 2, 5-10 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT).